A flow chart for array-based detection of gene expression

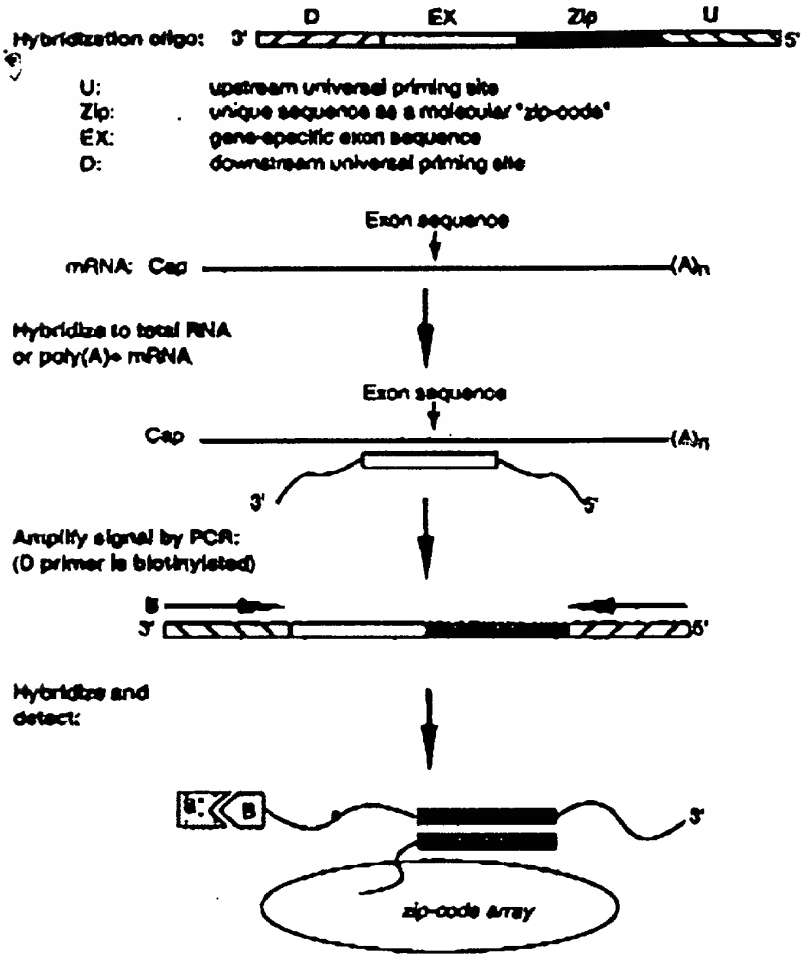


Figure 1

A flow chart for array-based detection of RNA alternative splicing

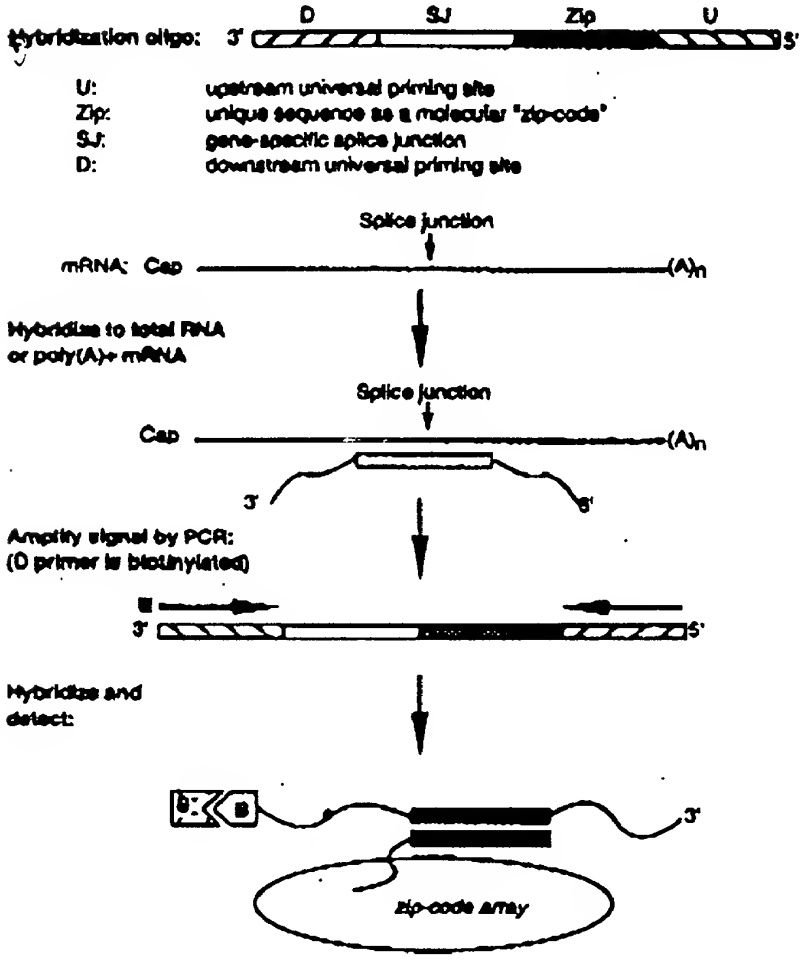


Figure 2

Genome-wide gene expression profiling using oligo-ligation strategy

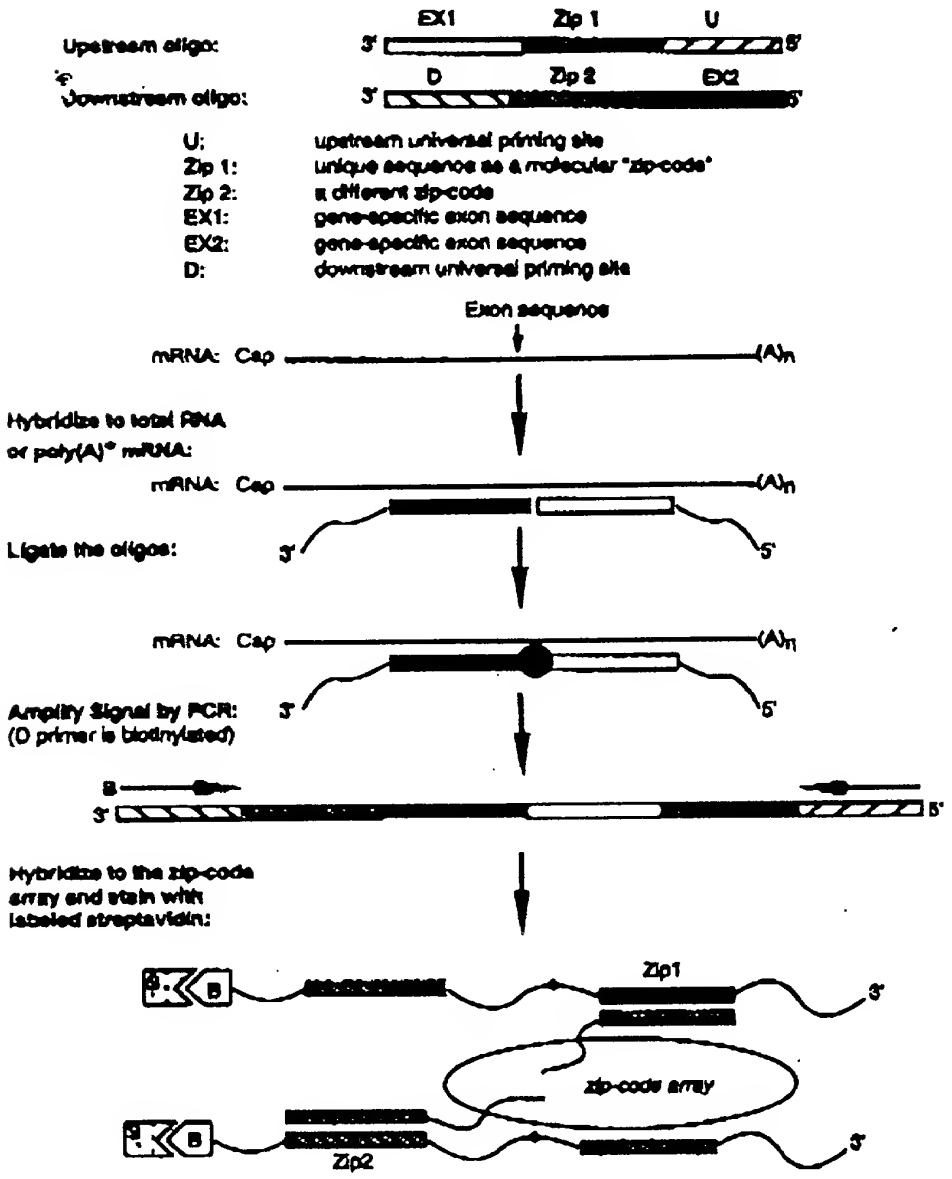


Figure 3

Genome-wide RNA alternative splicing monitoring using oligo-ligation strategy

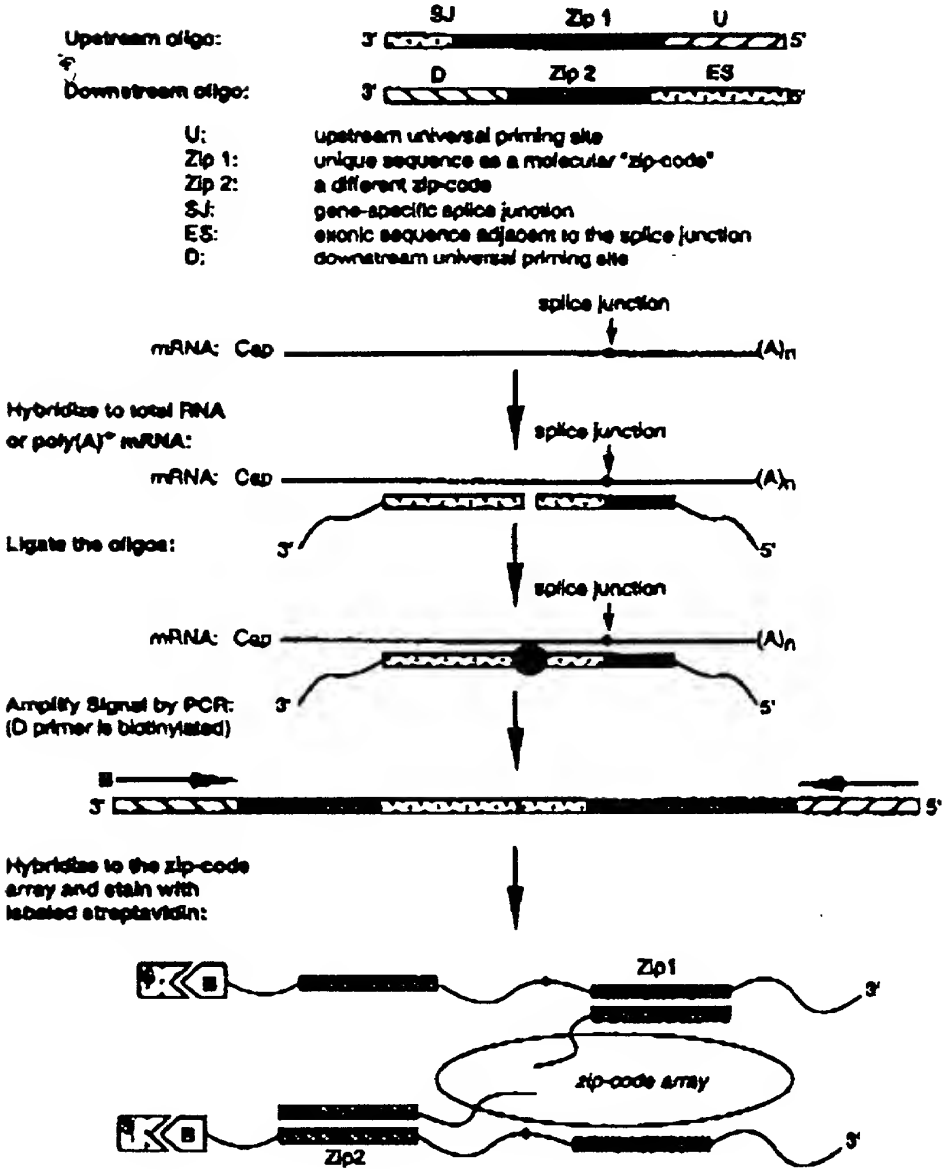


Figure 4

Direct genotyping using a whole-genome oligo-ligation strategy

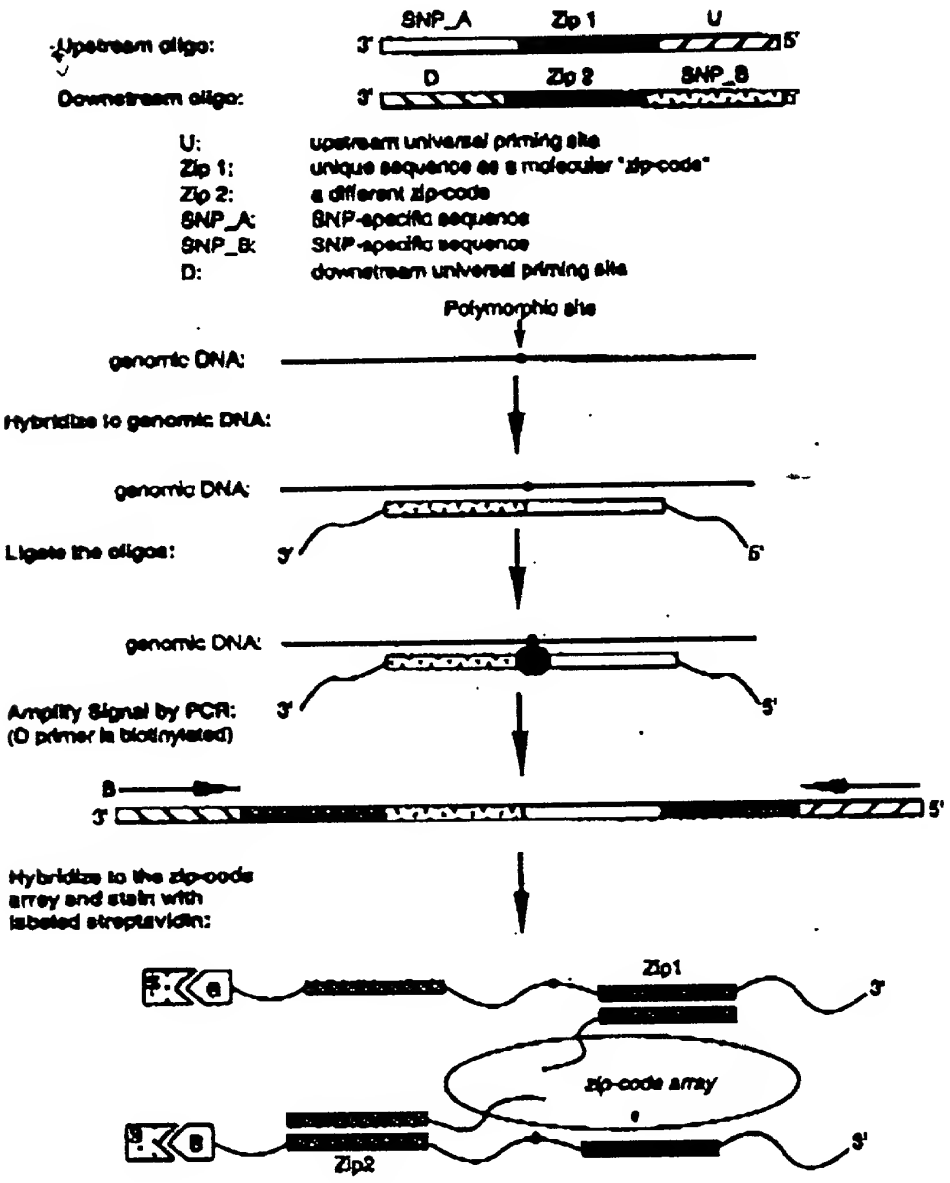
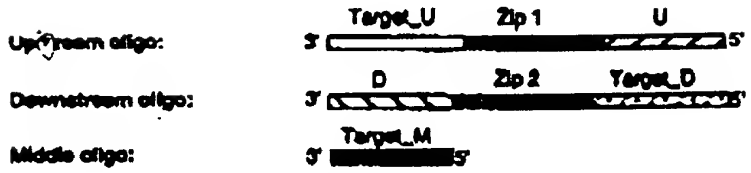


Figure 5

Whole-genome oligo-ligation strategy



U:	upstream universal priming site
Zip 1:	unique sequence as a molecular "zip-code"
Zip 2:	a different zip-code
Target_U:	upstream target-specific sequence
Target_D:	downstream target-specific sequence
Target_M:	middle target-specific sequence
D:	downstream universal priming site

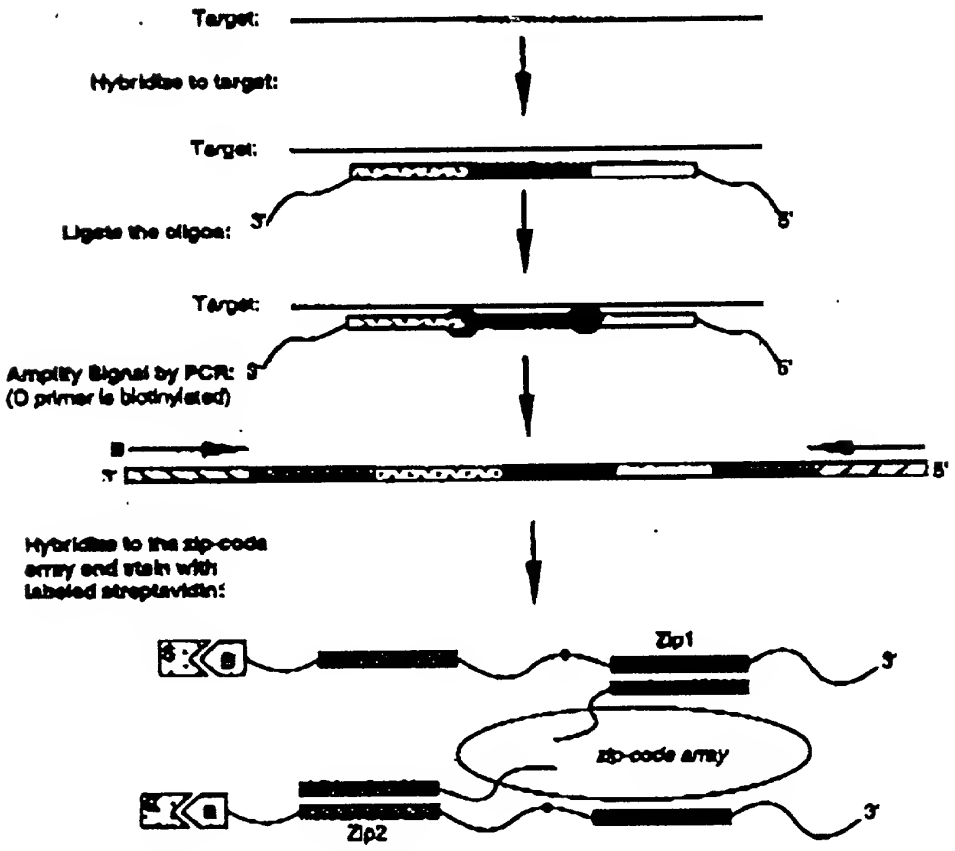


Figure 6

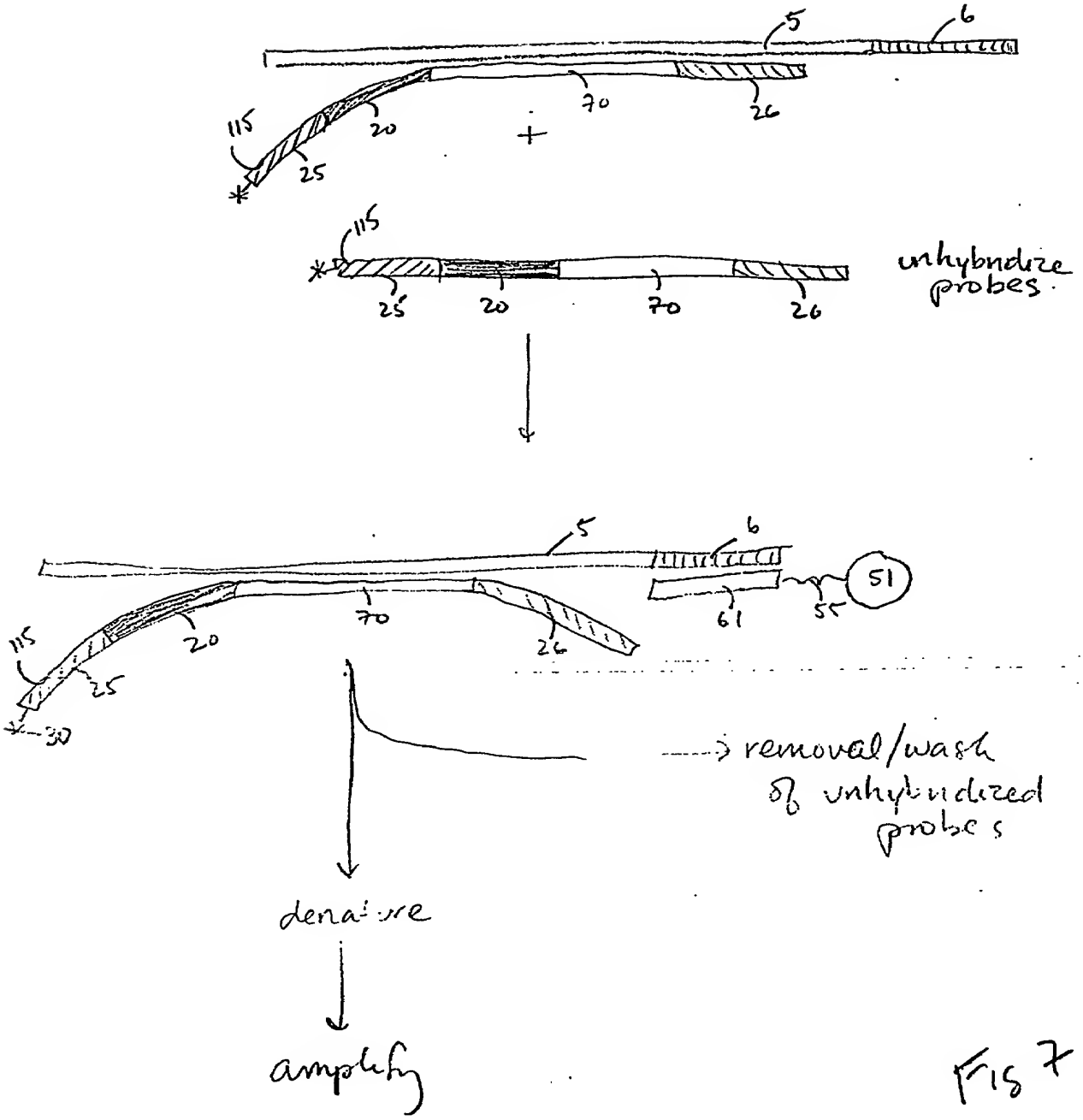

5
6
70
26
115
20
25
+
115
25
20
70
26
unhybridize probes
5
6
51
61
55
115
20
70
26
25
30
removal/wash of unhybridized probes
denature
amplify

Fig 7

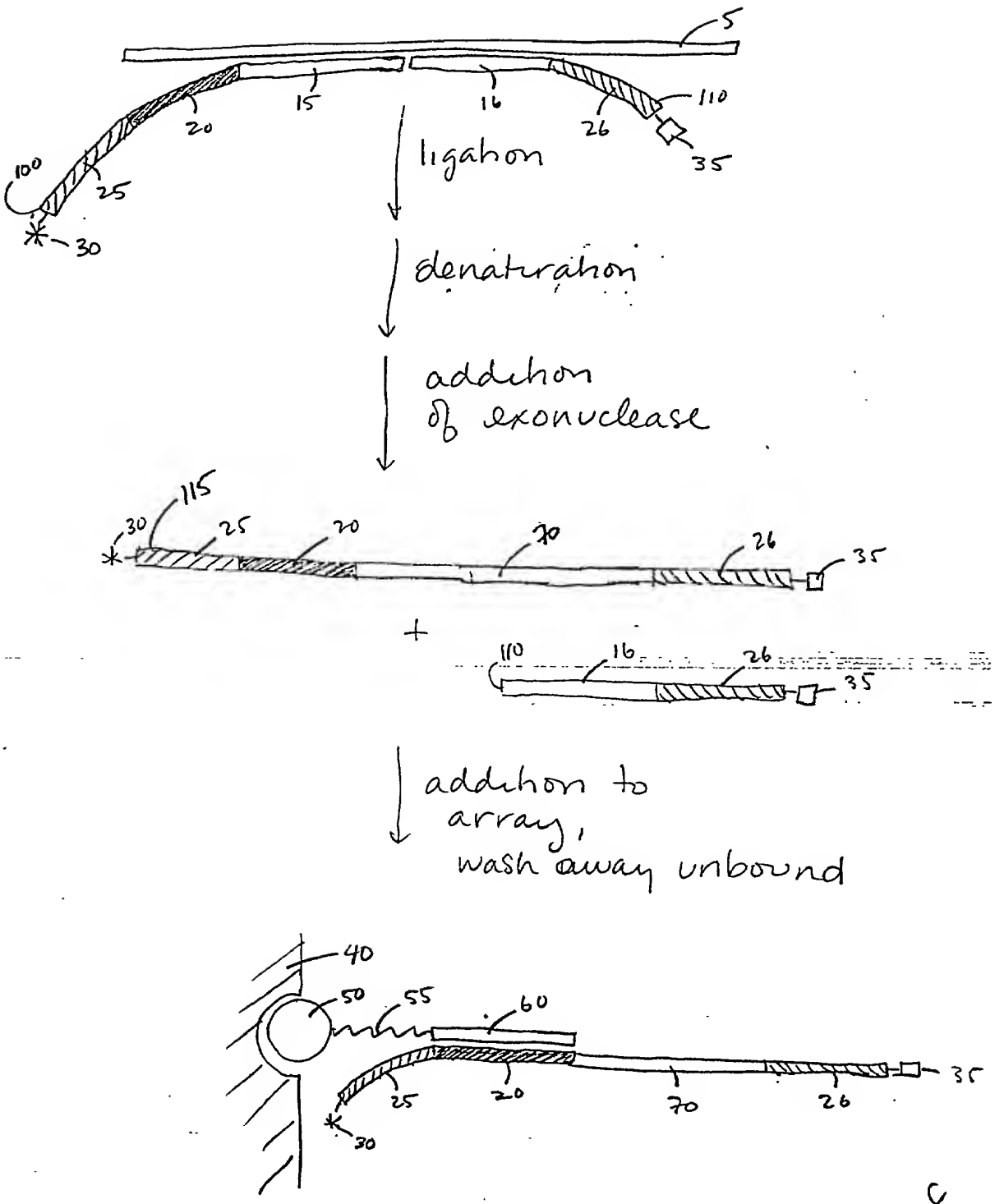

5
15
16
110
20
26
35
100
25
30
ligation
denaturation
addition
of exonuclease
115
30
25
20
70
26
35
+
110
16
26
35
addition to
array,
wash away unbound
40
50
55
60
35
25
20
70
26
30

Fig 8

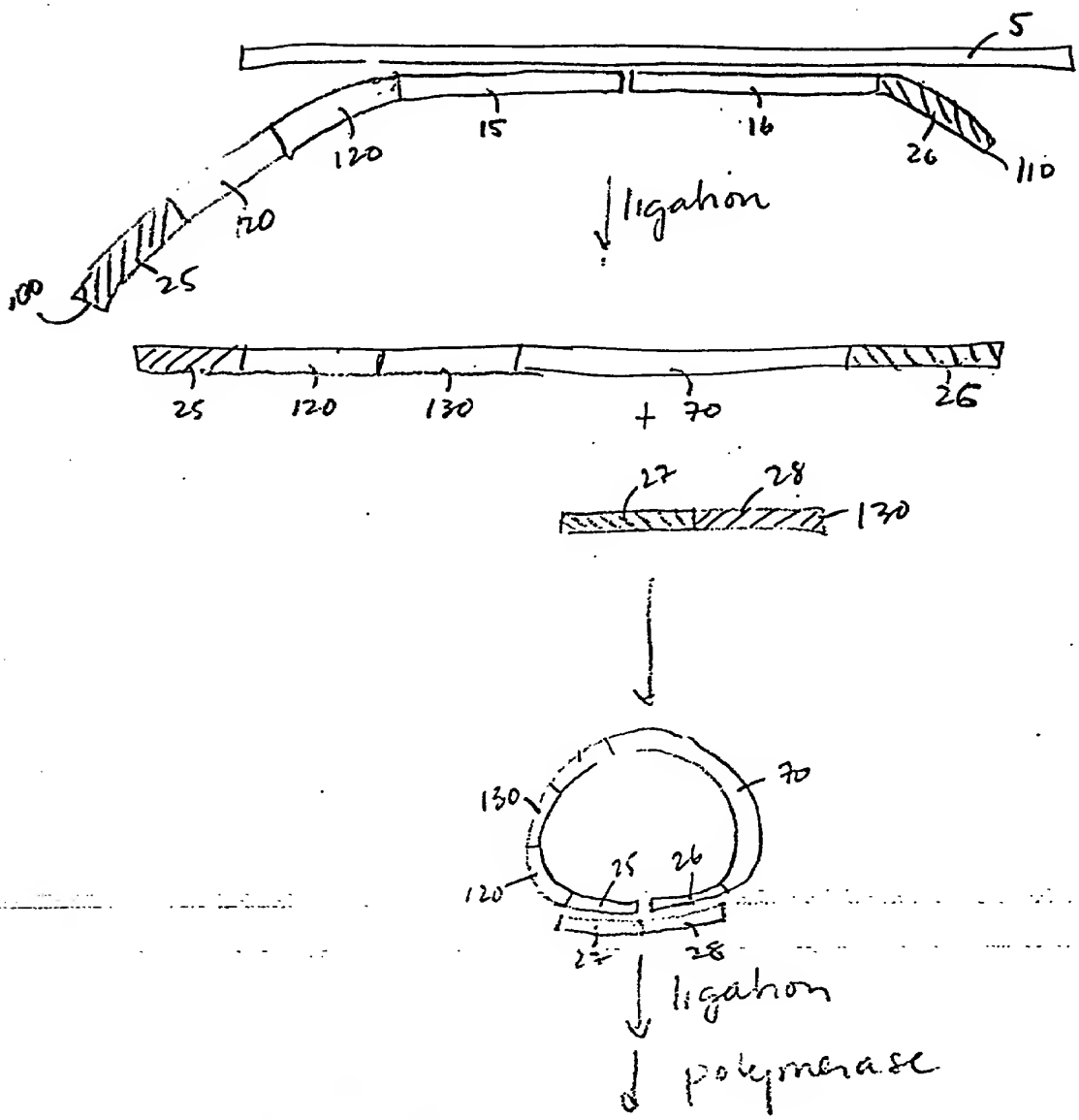

5
15
16
120
26
110
120
ligation
100
25
25
120
130
+ 70
26
27
28
130
70
130
25
26
120
27
28
ligation
polymerase

Fig 9

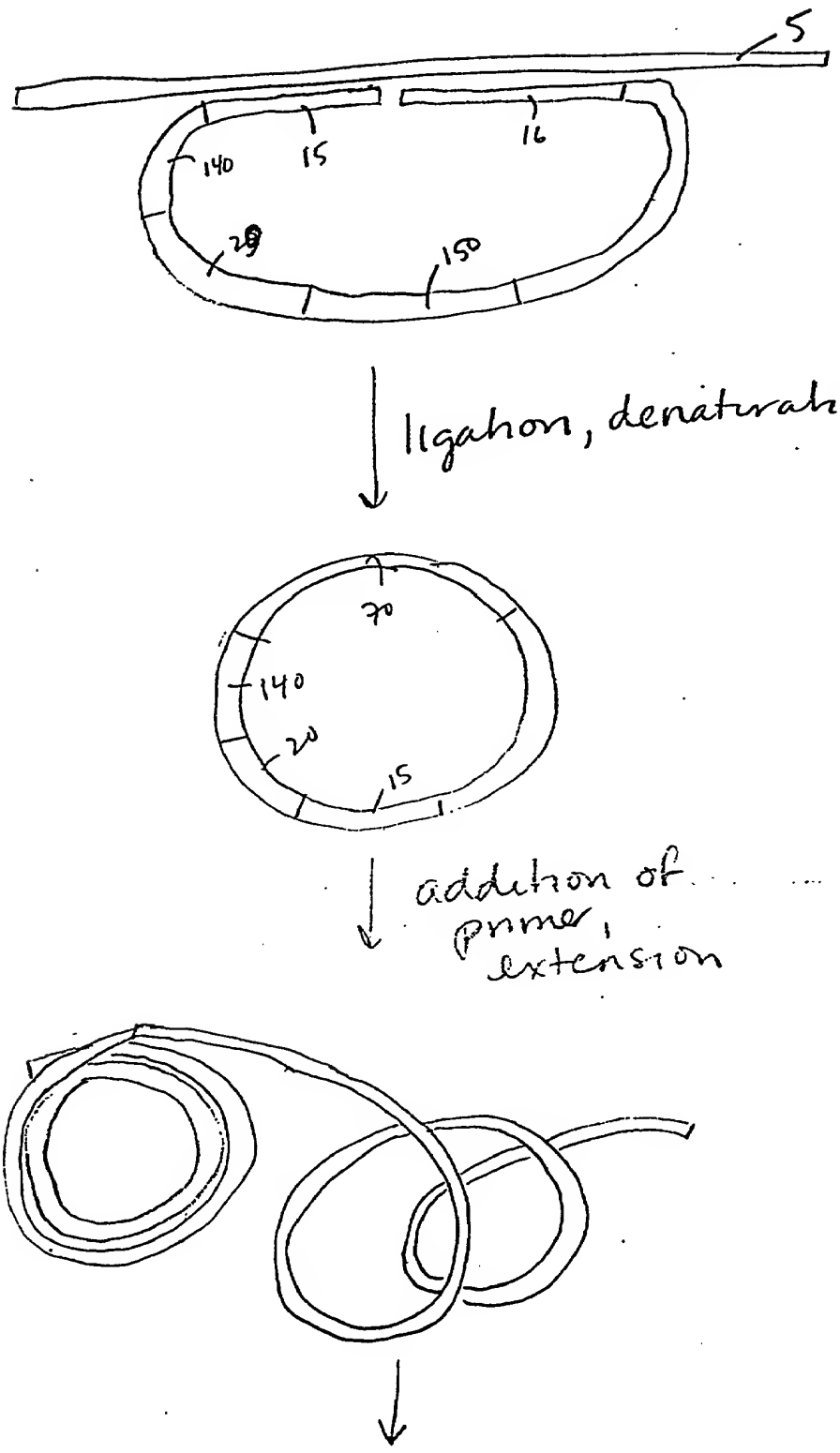
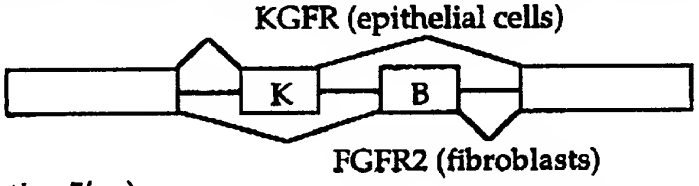

5
140
15
16
20
150
ligation, denaturation
70
140
20
15
addition of primer, extension

Fig 10

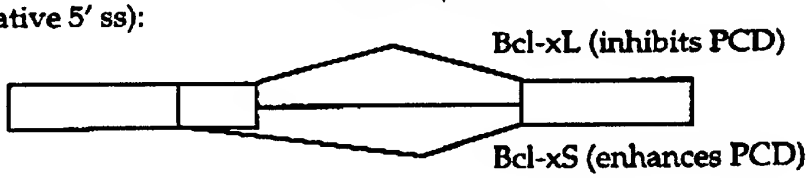
Alternative Splicing Targets Selected for Microarray Analysis

1. GAPDH (constitutive splicing control, signal normalization).

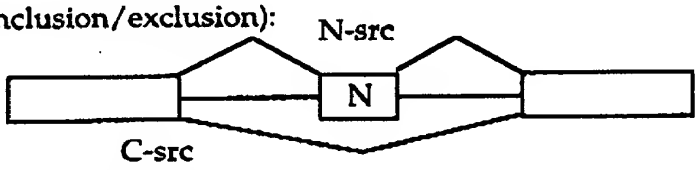
2. FGFR2/KGF (mutually exclusive exons, internal cell type control):



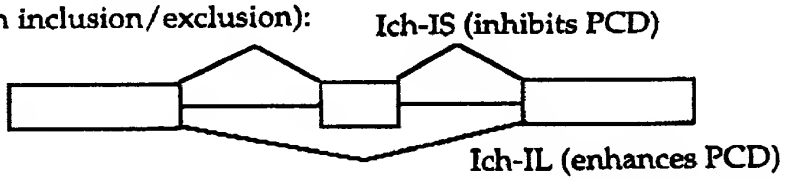
3. Bcl-x (alternative 5′ ss):



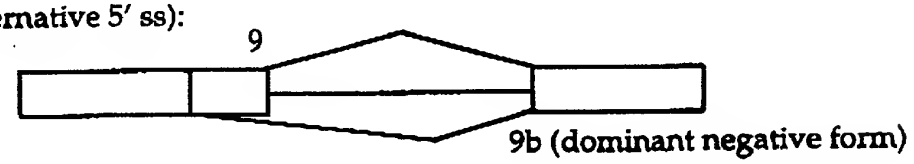
4. c-src (exon inclusion/exclusion):



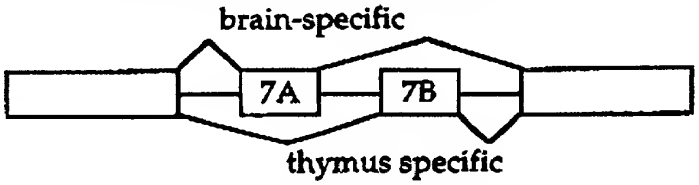
5. CASP2 (exon inclusion/exclusion):



6. CASP9 (alternative 5′ ss):



7. Fyn (src family tyrosine kinase, mutually exclusive exons):



8. NOS1 (alternative promoters/alternative 5′ss):

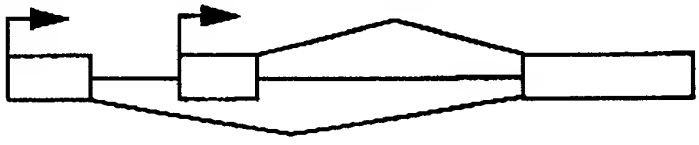


Fig 11